



SEQUENCE LISTING

08/062021

(1) GENERAL INFORMATION

- (i) APPLICANT: Lynn Bergmeyer  
Thomas J. Cummins  
John B. Findlay  
JoAnne H. Kerschner
- (ii) TITLE OF THE INVENTION: DIAGNOSTIC  
COMPOSITIONS, ELEMENTS, METHODS AND TEST KITS  
FOR AMPLIFICATION AND DETECTION OF HUMAN CMV  
DNA USING PRIMERS HAVING MATCHED MELTING  
TEMPERATURES
- (iii) NUMBER OF SEQUENCES: 26
- (iv) CORRESPONDENCE ADDRESS:
  - (A) ADDRESSEE: Eastman Kodak Company,  
Patent Legal Staff
  - (B) STREET: 343 State Street
  - (C) CITY: Rochester
  - (D) STATE: New York
  - (E) COUNTRY: U.S.A.
  - (F) ZIP: 1 4 6 5 0 - 2 2 0 1
- (v) COMPUTER READABLE FORM:
  - (A) MEDIUM TYPE: Diskette, 3.5  
inch, 1.44 MB storage (IBM)
  - (B) COMPUTER: IBM PS/2
  - (C) OPERATING SYSTEM: MS-DOS Version  
3.3
  - (D) SOFTWARE: PC-8 (Word for Windows)
- (vi) CURRENT APPLICATION DATA:
  - (A) APPLICATION NUMBER: To Be Assigned
  - (B) FILING DATE: To Be Assigned
  - (C) CLASSIFICATION: To Be Assigned
- (vii) PRIOR APPLICATION DATE: None
- (viii) ATTORNEY/AGENT INFORMATION:
  - (A) NAME: Tucker, J. Lanny
  - (B) REGISTRATION NUMBER: 27,678
  - (C) REFERENCE/DOCKET NUMBER: 67270

(ix) TELECOMMUNICATION INFORMATION:  
    (A) TELEPHONE: (716) 722-9332  
    (B) TELEFAX: (716) 477-4646

(2) INFORMATION FOR SEQ ID:NO:1

(i) SEQUENCE CHARACTERISTICS:  
    (A) LENGTH: 25 nucleotides  
    (B) TYPE: Nucleic acid  
    (C) STRANDEDNESS: Single  
    (D) TOPOLOGY: Linear  
(ii) MOLECULE TYPE: Primer for hCMV DNA  
(iii) HYPOTHETICAL: No  
(iv) ANTI-SENSE: No  
(vi) ORIGINAL SOURCE: Synthetically prepared  
(vii) IMMEDIATE SOURCE: Same  
(x) PUBLICATION INFORMATION: U.S. 5,147,777  
(xi) SEQUENCE DESCRIPTION: SEQ ID:NO:1

GAGGCTATTG TAGCCTACAC TTTGG 25

(3) INFORMATION FOR SEQ ID:NO:2

(i) SEQUENCE CHARACTERISTICS:  
    (A) LENGTH: 25 nucleotides  
    (B) TYPE: Nucleic acid  
    (C) STRANDEDNESS: Single  
    (D) TOPOLOGY: Linear  
(ii) MOLECULE TYPE: Primer for hCMV DNA  
(iii) HYPOTHETICAL: No  
(iv) ANTI-SENSE: No  
(vi) ORIGINAL SOURCE: Synthetically prepared  
(vii) IMMEDIATE SOURCE: Same  
(x) PUBLICATION INFORMATION: U.S. 5,147,777  
(xi) SEQUENCE DESCRIPTION: SEQ ID:NO:2

CAGCACCATC CTCCTCTTCC TCTGG 25

(4) INFORMATION FOR SEQ ID:NO:3

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 25 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Primer for hCMV DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: None
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:3

TGCACTGCCA GGTGCTTCGG CTCAT 25

(5) INFORMATION FOR SEQ ID:NO:4

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 25 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Primer for hCMV DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: U.S. 5,147,777
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:4

CACCACGCAG CGGCCCTTGA TGTTT 25

(6) INFORMATION FOR SEQ ID:NO:5

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 30 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Probe for hCMV DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: U.S. 5,147,777
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:5

GGTGTCACCC CCAGAGTCCC CTGTACCCGC 30

(7) INFORMATION FOR SEQ ID:NO:6

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 30 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Probe for hCMV DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: U.S. 5,147,777
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:6

GACACAGTGT CCTCCCGCTC CTCCTGAGCA 30

(8) INFORMATION FOR SEQ ID:NO:7

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 30 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Probe for hCMV DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: U.S. 5,147,777
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:7

GTGGAAGGCG GCTCGCTGGA AGCCGGTCGT 30

(9) INFORMATION FOR SEQ ID:NO:8

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 30 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Probe for hCMV DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: U.S. 5,147,777
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:8

GAACCGAGGG CCGGCTCACC TCTATGTTGG 30

(10) INFORMATION FOR SEQ ID:NO:9

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 41 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Probe for HIV-I DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: Unknown
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:9

ATCCTGGGAT TAAATAAAAT AGTAAGAATG TATAGCCCTA C 41

(11) INFORMATION FOR SEQ ID:NO:10

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 28 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Primer for HIV-I DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: Unknown \_\_\_\_\_
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:10

AGTGGGGGGA CATCAAGCAG CCATGCAA 28

(12) INFORMATION FOR SEQ ID:NO:11

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 26 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Primer for HIV-I DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: None
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:11

CTTGGTTCTC TCATCTGGCC TGGTGC 26

(13) INFORMATION FOR SEQ ID:NO:12

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 28 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Primer for HIV-I DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: None
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:12

TAGCACCCAC CAGGGCAAAG AGAAGAGT 28

(14) INFORMATION FOR SEQ ID:NO:13

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 28 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Primer for HIV-I DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: None
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:13

AGATGCTGTT GCGCCTCAAT AGCCCTCA 28

(15) INFORMATION FOR SEQ ID:NO:14

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 28 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Probe for HIV-I DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: None
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:14

GAGACCATCA ATGAGGAAGC TGCAGAAT 28



(16) INFORMATION FOR SEQ ID:NO:15

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 28 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Probe for HIV-I DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: None
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:15

GTGCAGCAGC AGAACAATTT GCTGAGGG 28

(17) INFORMATION FOR SEQ ID:NO:16

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 27 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Primer for hCMV DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: None
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:16

5'-CATTCCCACT GACTTTCTGA CGCACGT-3' 27

(18) INFORMATION FOR SEQ ID:NO:17

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 24 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Primer for hCMV DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: None
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:17

5'-TGAGGTCGTG GAACTTGATG GCGT-3' 24

(19) INFORMATION FOR SEQ ID:NO:18

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 30 nucleotides
  - (B) TYPE: Nucleic acid
  - (C) STRANDEDNESS: Single
  - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: Probe for hCMV DNA
- (iii) HYPOTHETICAL: No
- (iv) ANTI-SENSE: No
- (vi) ORIGINAL SOURCE: Synthetically prepared
- (vii) IMMEDIATE SOURCE: Same
- (x) PUBLICATION INFORMATION: None
- (xi) SEQUENCE DESCRIPTION: SEQ ID:NO:18

5'-GGTCATCGCC GTAGTAGATG CGTAAGGCCT-3' 30

(20) INFORMATION FOR SEQ ID:NO:19

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 nucleotides
- (B) TYPE: Nucleic acid
- (C) STRANDEDNESS: Single
- (D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: Primer for avian  
endogenous

provirus ev-1 DNA

(iii) HYPOTHETICAL: No

(iv) ANTI-SENSE: No

(vi) ORIGINAL SOURCE: Synthetically prepared

(vii) IMMEDIATE SOURCE: Same

(x) PUBLICATION INFORMATION: None

(xi) SEQUENCE DESCRIPTION: SEQ ID:NO:19

5'-GGAATGACGC AAGGACATAT GGGCGT-3' 26

(21) INFORMATION FOR SEQ ID:NO:20

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 nucleotides
- (B) TYPE: Nucleic acid
- (C) STRANDEDNESS: Single
- (D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: Primer for avian  
endogenous

provirus ev-1 DNA

(iii) HYPOTHETICAL: No

(iv) ANTI-SENSE: No

(vi) ORIGINAL SOURCE: Synthetically prepared

(vii) IMMEDIATE SOURCE: Same

(x) PUBLICATION INFORMATION: None

(xi) SEQUENCE DESCRIPTION: SEQ ID:NO:20

5'-CCCAGGTGCA CACCAATGTG GTGGAT-3' 26

(22) INFORMATION FOR SEQ ID:NO:21

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 nucleotides
- (B) TYPE: Nucleic acid
- (C) STRANDEDNESS: Single
- (D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: Primer for positive  
control target DNA

(iii) HYPOTHETICAL: No

(iv) ANTI-SENSE: No

(vi) ORIGINAL SOURCE: Synthetically prepared

(vii) IMMEDIATE SOURCE: Same

(x) PUBLICATION INFORMATION: None

(xi) SEQUENCE DESCRIPTION: SEQ ID:NO:21

5'-GGACTGTGCG CGTTGTATAC CCTGC-3' 25

(23) INFORMATION FOR SEQ ID:NO:22

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 nucleotides
- (B) TYPE: Nucleic acid
- (C) STRANDEDNESS: Single
- (D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: Primer for positive  
control target DNA

(iii) HYPOTHETICAL: No

(iv) ANTI-SENSE: No

(vi) ORIGINAL SOURCE: Synthetically prepared

(vii) IMMEDIATE SOURCE: Same

(x) PUBLICATION INFORMATION: None

(xi) SEQUENCE DESCRIPTION: SEQ ID:NO:22

5'-ACTCCCGAAG CGAATGGCAC GTGGA-3' 25

(24) INFORMATION FOR SEQ ID:NO:23

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 25 nucleotides

(B) TYPE: Nucleic acid

(C) STRANDEDNESS: Single

(D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: Primer for positive  
control target DNA

(iii) HYPOTHETICAL: No

(iv) ANTI-SENSE: No

(vi) ORIGINAL SOURCE: Synthetically prepared

(vii) IMMEDIATE SOURCE: Same

(x) PUBLICATION INFORMATION: None

(xi) SEQUENCE DESCRIPTION: SEQ ID:NO:23

5'-CATAGCTTGT GCCCGTGTGG CACGT-3' 25

(25) INFORMATION FOR SEQ ID:NO:24

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 25 nucleotides

(B) TYPE: Nucleic acid

(C) STRANDEDNESS: Single

(D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: Primer for positive  
control target DNA

(iii) HYPOTHETICAL: No

(iv) ANTI-SENSE: No

(vi) ORIGINAL SOURCE: Synthetically prepared

(vii) IMMEDIATE SOURCE: Same

(x) PUBLICATION INFORMATION: None

(xi) SEQUENCE DESCRIPTION: SEQ ID:NO:24

5'-CCAAGACGAG ACCGTCAGAG CTGGT-3' 25

(26) INFORMATION FOR SEQ ID:NO:25

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 nucleotides
- (B) TYPE: Nucleic acid
- (C) STRANDEDNESS: Single
- (D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: Probe for avian  
endogenous

provirus ev-1 DNA

(iii) HYPOTHETICAL: No

(iv) ANTI-SENSE: No

(vi) ORIGINAL SOURCE: Synthetically prepared

(vii) IMMEDIATE SOURCE: Same

(x) PUBLICATION INFORMATION: None

(xi) SEQUENCE DESCRIPTION: SEQ ID:NO:25

5'-AAGCTGTTGC CGCCATCAAA TAAACG-3' 26

(27) INFORMATION FOR SEQ ID:NO:26

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 nucleotides
- (B) TYPE: Nucleic acid
- (C) STRANDEDNESS: Single
- (D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: Probe for positive  
control target DNA

(iii) HYPOTHETICAL: No

(iv) ANTI-SENSE: No

(vi) ORIGINAL SOURCE: Synthetically prepared

(vii) IMMEDIATE SOURCE: Same

(x) PUBLICATION INFORMATION: None

(xi) SEQUENCE DESCRIPTION: SEQ ID:NO:26

5'-CTGCGTTAGA CCGAGAACTG TGGATAAAGG-3' 30